

REMARKS/ARGUMENTS

Applicants respond herein to the Final Office Action dated February 13, 2007.

Applicants' attorneys appreciate the Examiner's continued thorough search and examination of the present patent application.

Claims 1-10 and 12-36 are pending in this application. Claim 11 has been canceled.

Claims 1-4, 6-13, 15-22, 24-31 and 33-36 have been rejected. Claims 5, 14, 23 and 32 have been objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In response, as suggested by the Examiner Claims 5, 14, 23 and 32 have been rewritten as independent claims including limitations of the base claims and any intervening claims. Thus, newly independent claims 5, 14, 23 and 32 are now allowable.

Claims 13 and 16 have been rejected under 35 U.S.C. §112 for reciting a limitation having insufficient antecedent basis.

In response, as suggested by the Examiner the limitation "said first processing liquid guide part" has been amended to state "pure water guide part" as in claim 10.

Reconsideration and withdrawal of this rejection are respectfully requested.

Claims 1-4, 10 and 12-13 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,903,717 to Sumnitsch ("Sumnitsch") in view of U.S. Patent No. 6,273,104 to Shinbara et al. ("Shinbara") and further in view of Japanese Patent Application Laid-Open No. 11-87294 ("294").

Reconsideration and withdrawal of this rejection are respectfully requested.

Claims 6-9 and 15-18 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Sumnitsch in view of Shinbara in view of Japan '294 and further in view of U.S. Patent No. 5,927,303 to Miya et al. ("Miya").

Reconsideration and withdrawal of this rejection are respectfully requested.

Claims 19-20 and 28-29 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Sumnitsch in view of Shinbara in view of Japan '294 and further in view of U.S. Patent No. 6,807,974 to Ono et al. ("Ono").

Reconsideration and withdrawal of this rejection are respectfully requested.

Claims 24-27 and 33-36 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Sumnitsch in view of Shinbara in view of Japan '294 in view of Ono and further in view of Miya.

Reconsideration and withdrawal of this rejection are respectfully requested.

Independent claims 1, 19, 10, and 28 call for a plurality of guide parts and a plurality of processing liquid passages that are formed by a guards feature that ensures a space between a guide part that is disposed closest to a substrate holding part and the substrate holding part, the provided space being similar to the space between remaining guide parts.

As a result, advantageously, the substrate holding part disposed closest to the substrate suppresses the bouncing of droplets of a second processing liquid (or chemical solution) that are flying and spattering from the substrate to prevent the bounced droplets from attachment to and contamination of the substrate.

The above-described feature is achieved by setting an internal diameter of “a first cylindrical part arranged coaxially with said substrate holding part” greater than an internal diameter of a “third cylindrical part branching outwardly from said second cylindrical part and extending vertically downwardly from the lower end of an inclined part” as recited in claim 1; positioning an inclined part forming the lowermost chemical solution guide part “above an outer cylindrical part forming a processing liquid passage that corresponds to the chemical solution guide part immediately overlying the lowermost chemical solution guide part” as recited in claim 10; curving a second guard “such that the internal diameter of said first cylindrical part is greater than the internal diameter of said third cylindrical part” as recited in claim 19; and curving the second guard “such that said inclined part forming said second guide part is positioned above said fourth cylindrical part forming said third processing liquid passage” as recited in claim 28.

In contrast, the references cited by the Examiner do not teach or suggest the above quoted feature of the independent claims of the present application. For instance, Sumnitsch merely discloses a stack of chemical solution guide part of substantially annulus ring shape, but fails to teach or suggest a plurality of guide parts and a plurality of processing liquid passages formed by a guards feature.

Shinbara merely discloses one stage cup 14 of a bowl-like shaped member which looks like a circle when viewed from above. Shinbara also fails to teach, disclose, or suggest multi-stage guards or a plurality of guide parts and a plurality of processing liquid passages formed by a guards feature.

Further, '294 discloses that each guide part, e.g., a guide part 30, receives processing liquid in a vertical section on the side of a substrate holding part, e.g., vertical section 33, in a plurality of vertical sections, e.g., vertical sections 33, 34a. As a result, a space between each guide part and the substrate holding part is smaller in a guide part on the side of the substrate holding part. Thus, in the guide part disposed closest to the substrate holding part, particles are produced by the bouncing of a second processing liquid or chemical solution.

Ono merely discloses a plurality of guide parts and a plurality of processing liquid passages formed by a guards feature. Ono fails to disclose a configuration ensuring a space between one of guide parts disposed closest to the substrate holding part and the substrate holding part.

Therefore, Summitsch, Shinbara, and '294 fail to teach or suggest setting an internal diameter of "a first cylindrical part arranged coaxially with said substrate holding part" greater than an internal diameter of a "third cylindrical part branching outwardly from said second cylindrical part and extending vertically downwardly from the lower end of an inclined part" as recited in amended claim 1, and positioning an inclined part forming the lowermost chemical solution guide part "above an outer cylindrical part forming a processing liquid passage that corresponds to the chemical solution guide part immediately overlying the lowermost chemical solution guide part" as recited in claim 10.

Moreover, Summitsch, Shinbara, '294, and Ono do not teach or suggest curving a second guard "such that the internal diameter of said first cylindrical part is greater than the internal diameter of said third cylindrical part" as recited in amended claim 19, and curving the second guard "such that said inclined part forming said second guide part is positioned above said fourth cylindrical part forming said third processing liquid passage" as recited in claim 28.

Miya was not used by the Examiner in rejection of independent claims.

References of record, therefore, do not render claims 1, 10, 19 and 28 obvious.

Claims 5, 14, 23, and 32, as discussed above, have been rewritten as independent claims and are now allowable.

Claims 2-4, 6-9, 12-13, 15-18, 20-22, 24-27, 29-31, and 33-36 depend directly or indirectly from above discussed independent claims and are, therefore, patentable for the same reasons, as well as because of the combination of features in those claims with the features set forth in the respective independent claims.

Accordingly, the Examiner is respectfully requested to reconsider the application, allow the claims as amended and pass this case to issue.

THIS CORRESPONDENCE IS BEING
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MM:KS:JK:kc:ck

Respectfully submitted,



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